DOCUMENT RESUME

ED 267 113 TM 860 204

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TITLE Models for Uses of Data in School Improvement: From Fast-Food to Five-Star Restaurant.
INSTITUTION Research for Better Schools, Inc., Philadelphia, Pa.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Nov 85
NOTE 22p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adults; *Data; Decision Making; *Educational Environment; *Educational Improvement; Educational Needs; *Models; School Effectiveness; Surveys; *Teachers
IDENTIFIERS *School Assessment Survey (Wilson)

ABSTRACT

This paper describes the School Assessment Survey (SAS) and three models for the use of data to enrich the local decision-making process about school improvement and to provide school leaders with new perspectives on their organizations. The SAS measures teachers' perceptions on nine organizational dimensions and combines the results to produce an overall school portrait. The focus of the first model is on collecting data quickly with little attention given to how the information might be used. This model has the advantage of being inexpensive and easy to implement, but the risk is high that the resultant data will not be used. In the second model, additional training is offered to help educators move beyond analysis to consider changes in their schools. The advantage is that it gets people together to address school issues, but its weakness is often lack of any long-term commitment to a targetted improvement effort. In the third model, careful thought is given to where the organization should go and why. The advantage is that the effort is often a key priority for the school. Its disadvantage is the continual struggle to maintain the effort and to have it become part of the value system of the school. (PN)

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Models for Uses of Data in School Improvement: From Fast-Food to Five-Star Restaurant

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November, 1985

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The preparation of this paper was supported by funds from the National Institute of Education, Department of Education. The opinions expressed do not necessarily reflect the position or policy of NIE, and no official endorsement should be inferred.

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Models for Uses of Data in School Improvement:
From Fast-Food to Five-Star Restaurant

The recent flood of reports criticizing the performance of the nation's schools has prompted increased interest in the use of organizational data to help target improvement initiatives. A variety of knowledge bases, including effective schools research, literature on organizational effectiveness, and research on excellence in business has spawned a flurry of activity in some schools. This trend toward data-based decision-making has contributed to some significant improvement (Wallace et al., 1984), but a large number of schools have not acted or remain unsure of what to do. Faced with declining resources, mixed messages from the environment, and strong internal pressures to maintain the status quo, local educators find the use of organizational data for decision-making particularly complex. Often what they need most is some systematically collected data about the organization that accurately describes important working conditions. These data then can be used constructively to inform decisions about improvement initiatives.

While much of the current school improvement literature focuses on identifying organizational conditions that promote effectiveness (Clark, Lotto, & Astuto, 1984), there are few efforts to collect empirical data on those conditions. Unfortunately, most data readily available to school people are limited to easily collected information like demographic characteristics or test scores. Exclusive reliance on this type of data has contributed to the "hyperrationalization" of the schools (Wise, 1979), where what matters most is determined by what is measured (Schein, 1985). By using readily available local data schools cannot easily compare their own needs with national, state, or district priorities (Burstein, 1984).

Moreover, educators often lack practical experience in using comparative data when they do exist.

A number of data sources are available to help enrich the local decision-making process about school improvement and to provide school leaders with new perspectives on their organizations (Blum & Butler, 1985; Gottfredson, 1984; Gauthier, 1985). While we know how to develop these measurement tools, we know less about how educators use them. However, our experience with the School Assessment Survey--SAS--(Wilson, 1985), has allowed us to address this issue. We have identified three models for use of data in school improvement from our training and technical assistance work. While based on SAS, the three models may be applied to the use of any data. The remainder of the paper describes SAS and the three models for the use of data.

An Example of Organizational Data

One important way to learn about the organizational health of a school is to survey its teachers. SAS represents one such effort that measures the perceptions of teachers about nine organizational dimensions in schools. A number of the survey's characteristics enhance its potential to help practitioners make decisions about improvement initiatives in their schools. First, the dimensions have been drawn from the research literature on school improvement and effectiveness. Figure 1 defines the organizational dimensions measured by the survey and summarizes some of that research literature. Second, the instrument has a history of five years of development, during which time it has been administered to over 10,000 teachers in almost 400 schools from around the nation. We have listened to the advice of principals and teachers and have made changes that enhance its

Figure 1. The Nine School Climate Dimensions Measured by the School Assessment Survey (SAS).

DIMENSION	DEFINITION	SCHOOL EFFECTIVENESS RESEARCH	SCHOOL IMPROVEMENT RESEARCH
Goal Consensus	Agreement among teachers on which student skills and characteristics should receive most attention for development.	When staff agree on the importance of basic skills instruction in urban schools, achievement increases: • Brookover et al., 1979 • Clark, Lotto, & McCarthy, 1980	Goal consensus plus the belief that an innovation facilitates meeting valued goals leads to implementation: • Berman & McLaughlin, 1975 • Wilson & Corbett, 1983
Facilitative Leadership	Actions of the principal that encourage and support the professional behavior of the teaching staff.	Principal leadership contributes to student achievement both directly and by working through teaching behavior when controlling for student SES: • Gross & Herriott, 1965 • Calif. State Dept. of Ed., 1980 • Firestone & Wilson, 1985	Principal support for an innovation contributes to its implementation: • Berman & McLaughlin, 1975, 1977 • Corbett, Dawson, & Firestone, 1984
Centralization of Influence: Classroom Instruction	The ability of the principal to get teachers to carry out his or her wishes with respect to teaching activities.	Decentralization promotes higher achievement: • Firestone & Wilson, 1985	
Centralization of Influence: Curriculum and Resources	The ability of the principal to get teachers to carry out his or her wishes with respect to courses, schedules, staff assignments, and the allocation of resources.	Decentralization promotes higher achievement: • Firestone & Wilson, 1985	
Vertical Communication	The extent to which information about instruction is shared between teachers and administrators.	Frequent communication between teachers and administrators about instruction promotes higher achievement: • Wellisch et al., 1978	
Horizontal Communication	The extent to which information about instruction is shared among teachers.		Frequent communication leads to the spread of change and promotes the effectiveness of instruction: • Little, 1982 • Rosenblum & Louis, 1981 • Wilson & Corbett, 1983
Staff Conflict	The frequency of disputes about school-related matters.		Conflict reduces the chances of implementation and the spread of change: • Corbett, Dawson, & Firestone, 1984 • Firestone, 1980 • Rosenblum & Louis, 1981
Student Discipline	The presence of an orderly environment in the school.	A sense of order that is fair, consistent and encourages responsibility will promote higher achievement: • Rutter et al., 1979	
Teaching Behavior	Actions of teachers that enhance the quality of instruction for all students in their classrooms.	High quality teaching of all children promotes student achievement: • Brookover et al., 1979 • Gross & Herriott, 1965	

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utility. Third, the survey seeks the views of all teachers in a school, thus generating the full spectrum of opinion about the school's organizational health. The individual results are combined to paint an overall portrait of the school. With the renewed conviction that "schools can make a difference" and with evidence of alterable conditions that affect the quality of schools, the focus on schoolwide involvement offers a useful antidote to explanations based on individual personalities or economic resources. Finally, the data are reported in a way that is useful to practitioners. A graphic presentation allows school people to compare their school quickly and easily with other schools (see Figure 2 for a sample profile).

Models for Using Data

Data can be to an organization what food is to an individual. If used as a source of sustenance, data support the growth and development of an organization. However, the sustenance can come from several sources. Continuing the food analogy, our experience suggests that the consumption of data by schools falls broadly into three models. In the first model, a fast-food analogy, schools are hungry for information but are willing to invest only minimally in the activity. The focus is on collecting data quickly with little attention given to how the information might be used. In the gourmet cafeteria model, more thought has gone into the choice of what data to consume and how it might be used. Additional training is offered to help educators move beyond analysis to consider changes in their schools. In the final model, the five-star restaurant model, careful thought is given to where the organization should go and why. The remainder of this paper provides an elaboration of each model, drawing from our

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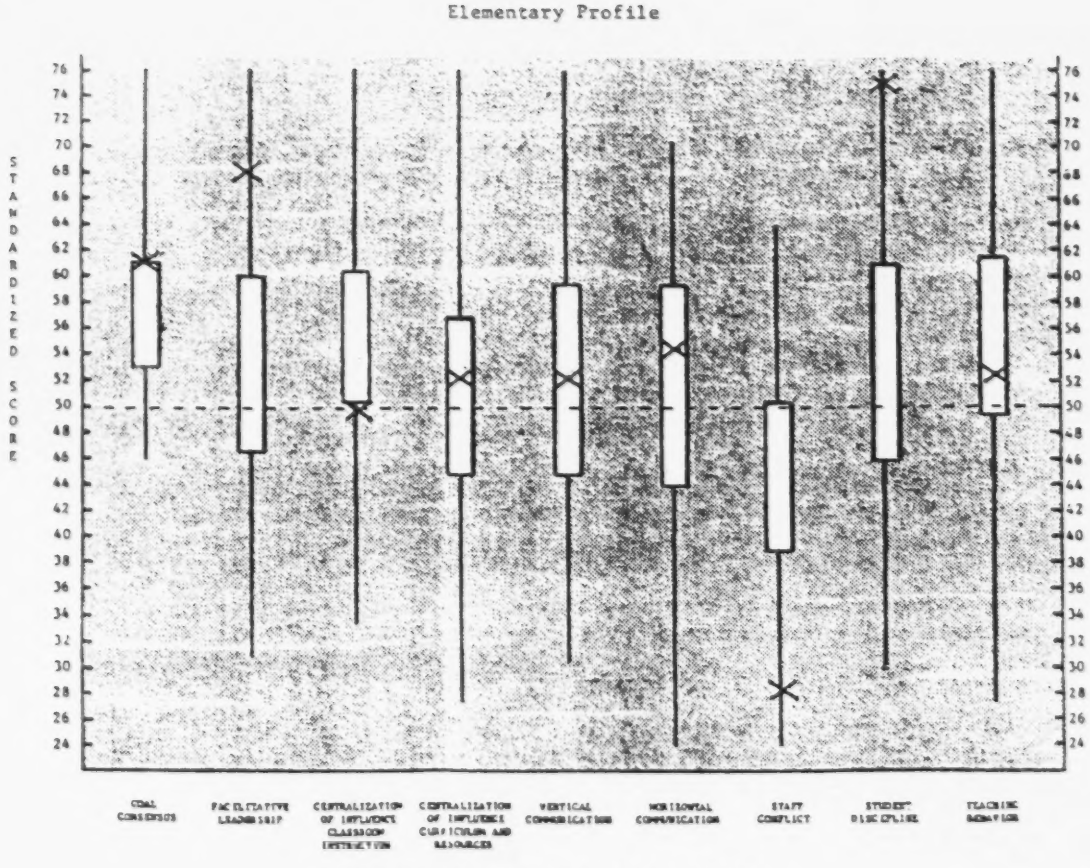
FIGURE 2

Sample School Profile from SAS



	CONSENSUS	FACILITATIVE LEADERSHIP	CENTRALIZATION OF INFLUENCE: CLASSROOM INSTRUCTION	CENTRALIZATION OF INFLUENCE: CURRICULUM AND RESOURCES	VERTICAL COMMUNICATION	HORIZONTAL COMMUNICATION	STAFF CONFLICT	STUDENT DISCIPLINE	TEACHING BEHAVIOR
raw score	.551	4.67	-1.01	1.72	1.41	2.50	0.35	4.05	76.8

experience in almost 400 schools where data were used as a tool of improvement.

The Fast-food Model

A person who pulls into a McDonalds or Burger King is looking for a quick, cheap meal. There is little planning or thought given to the effort. The scene is quite anonymous with some people not even getting out of their cars. It is also often an individual effort. With the exception of families, one rarely finds groups of people enjoying the meal together. While the quality of nutrition may be suspect, that disadvantage is offset by the speed with which one can be served, the ease of access, and the expense. There is also little attachment to the activity of consuming the fare offered by such establishments.

A number of consumers of data with whom we have worked fall readily into the fast-food image. For them the decision to gather information did not involve a great deal of planning or discussion about how it might be used. Short timelines are the hallmark of this model. What often affects the decision to collect data is whether it can be available by the next faculty or school board meeting.

Not unlike the drive-through feature of most fast-food restaurants, those who opt for this model will not invest much time in using data. They take time to find out about the data source, administer the survey at a staff meeting, and study the results when they are returned; there is little consideration about followup activities. However, if and when the data are made public, they frequently spark a healthy round of discussion. Apart from identifying specific strengths and weaknesses, the results of the

survey legitimize conversation about informally recognized problems and force the discussants to think more broadly about the sources of problems and alternative solutions.

The number of people involved is also limited in this model. There are those who complete the survey, but they often do not know why it is being done nor do they always see the results. One person takes the lead, whether it be the superintendent, the principal, or the head of a school improvement committee. This person is responsible for administering the survey and reviewing the results. The results may go no farther than this initial contact person. Without a "champion" who has a commitment to see that the information is reviewed and used by others and a structure for that to happen, the data frequently end up in the bottom of someone's desk drawer. As one principal commented, "The data weren't particularly startling and I didn't see any reason to share it with my faculty."

On occasion someone will make sure the data are seen by others. One vice-principal shared the SAS results with an improvement committee. They, in turn, identified several weaknesses at the school and then created separate task forces to elaborate the problems and investigate possible solutions. Without a formal structure that provides the vehicle for action and someone in the school who is willing to sell the ideas to others, more often than not the data remain unused.

From a financial perspective this model also requires only minimal resources. The cost of administering a survey and producing reports is not high. Some staff time must also be spent in finding out about the survey, studying the results, and planning for possible feedback to a larger audience, but this can be minimal.

This model is also characterized by a lack of any strong commitment to the data collection effort or to the process of using the information for improvement. The participants have not clearly thought out why they are involved nor have they considered the relationship of the information collected to any long-range plans for the school. In a few rare cases, the processes of data collection, analysis and action have been built into a set of goals for which the principal is held accountable by the superintendent. In those efforts, even a low level activity like a fast-food meal has some real potential for constructive organizational change.

The above discussion offers a fairly rational view of how data can be used by educators. There is an implicit assumption that the primary reasons for data collection are objective diagnosis and improvement purposes. That is often far from reality. While no systematic effort has been made to followup on data use by local practitioners, discussion with many of them indicates that there are political reasons for becoming involved in a data-based improvement activity that go beyond the purely technical aspects of improving the quality of schooling. Two such political uses occur frequently in the fast-food model: legitimation and evaluation of individuals.

The notion of legimitation focuses on the need for schools to engage in data-based improvement because of the myths created by their institutional environments rather than the demands of any day-to-day work activity. The recent attention American education has received because of its alleged failures to adequately educate students requires that schools make some effort to improve. It is not important whether the activity has any direct impact on the quality of instruction or learning. It is often satisfactory just to be engaged in an improvement effort.

Another common political use of data is for evaluation purposes, for example, to evaluate individual principals. This kind of evaluation, while clearly not an intended or even appropriate use for SAS data, has both positive and negative implications. For the principal who feels that he or she manages a healthy organization, the data have been used to call successes to the attention of the superintendent. On the other hand, central office staff might use these data to help evaluate the performance of local school administrators.

Gourmet Cafeteria Model

People who dine in a gourmet cafeteria have chosen that site for very different reasons than the fast-food restaurant. First, there is usually some preplanning which may not necessitate making reservations, but does involve some discussion about the alternatives. Second, it is more fun to eat in such a place with friends. There is often an effort to recruit a party for an evening's outing. Third, this is often not the only activity of the evening; dinner is only loosely tied to the rest of the evening's entertainment plans. Fourth, while there is a moderate cost, it does not require advanced saving. Nor is there the anticipation of this being the main social event of the month. Finally, while someone is there to coordinate and make sure the group attends, it does not require a major effort to organize.

Educators who buy into the "gourmet cafeteria" model of data-based improvement show similar reasoning. This model is characterized by some planning focused primarily on data collection and secondarily on some other loosely connected improvement activity. Time and careful thought go into the selection of the data source: the person taking charge reviews

materials from several different sources, has lengthy conversations with the developers and makes a decision after consulting with colleagues. The planning also structures some activities to follow data collection in the hopes that these will help put the data to use in a specific improvement effort.

While someone clearly takes charge in this model, it varies from the fast-food model in that it is more likely to be a team effort. Identifying and proposing solutions to problems are best accomplished with a team. The SAS project specifically encourages cross-hierarchical teams to work together to identify and implement improvement efforts (Miller, 1986). The collective wisdom of a number of participants is better than knowledge provided by one individual. Furthermore, if the improvement effort includes the enthusiastic participation of different role-groups (e.g., the principal and teachers working together), the potential for long-term continuation is greater.

Another distinguishing feature of this model is that the data collection effort is not the only event. The school probably will not change very much if all that is accomplished is the identification of some problem areas through a survey. In the gourmet cafeteria model, an effort is made to move beyond problem identification and to provide some training about what to do next. This training is accomplished through workshops for teams of school people. Each workshop presents topical themes which SAS and other data suggest best meet the needs of specific clients, and typically include: team building, diagnostic analysis, problem solving, and the role of leadership. The more successful training efforts are those with practical activities relevant to the daily lives of school people but which

also have a larger message about constructive change in the school organization.

While the effort expended in the gourmet cafeteria model is greater than that for the fast-food model, one evening's dinner is not the only event. In this model, the organizational data are used as one piece of a larger staff development or school improvement effort. Some investment of time is made reviewing alternative choices, planning for the training sessions, and developing some procedures for followup, but the major effort goes into a larger plan. The financial investment here is also larger than in the fast-food model. In addition to the staff time and money for the survey analysis, there may be an investment in fees for an organization development trainer and materials for the training activities. Nevertheless, while these investments in time, energy, and money are greater than the fast-food model, so, too, is the potential payoff. By linking the data analysis to training in organizational processes, participants get a better understanding of the nature of the problems they are facing in their schools and the pitfalls they may encounter in struggling for solutions.

As hinted above, it usually takes the effort of "a champion" to get this model off the ground. A champion can come from a variety of positions, including the teacher who is the chair of a school improvement committee, the principal, a district office person in charge of staff development, the superintendent, or an external linker from a service agency (university, state department, professional association) who sells the service to a group of school districts. While the champion is an enthusiastic supporter of the activity, unless the effort becomes a central part of a comprehensive school improvement effort or unless structures are created to insure continuation, the potential for long-term change is greatly diminished.

An important political use of this model is to empower teachers. The educational profession has frequently been described as having a flat organizational structure. Without the inclusion of differentiated roles whereby power can be dispersed among a variety of organizational members, it often becomes centralized in the office of a few (e.g., the principal). This often leads to internecine battles mounted by teachers in attempts to gain a share of that power. A data-based improvement effort that involves different groups offers the opportunity for teachers to obtain major input into decision-making. By getting multiple members involved in the decision-making process and knowledgeable about important characteristics of the organization, their potential to have an impact on the future direction of the organization increases. In some cases, participation is sought not so much for the potential improvement that may result, but rather for the opportunity to gain additional power.

Five-Star Restaurant Model

Upon entering a five-star restaurant, there are a few assumptions one can make about the diners. First, they are not in a rush because they want to make the 8:00 show at the local movie theatre; this meal will probably be their evening's entertainment. Predictably, they are going to pay a fair amount of money for their meal and are willing to do so because they understand that higher prices are part of the five-star restaurant experience. Five-star diners consider themselves gourmets: the content of the meal appeals to them as much as the process of eating and tasting the food. And finally, people usually do not walk in off the street to a five-star restaurant. Someone has taken responsibility for selecting the

restaurant, making the reservation, and organizing the transportation--in short, a restaurant champion.

A school or school district that undertakes a comprehensive model of data-based improvement and organization change is not unlike the diners in a five-star restaurant. A school moving in that direction has given careful thought about where it wants to go and why. There is commitment of resources such as time, people, and money. There is a champion or leader who has a vision about the school and articulates that vision. Finally, comprehensive data collection is only one part of a larger process that includes problem solving, planning, and organization development.

The five-star restaurant model begins with the recognition that there is a need for improvement and renewal. This effort involves the school administration, central office staff, local board of education, teaching staff and teachers association, and, to some extent, students and parents. These constituent groups must support the comprehensive improvement effort if it is to succeed. This is the beginning of commitment building, a critical first step in this model.

An example of this commitment comes from a school that has used SAS and that has been involved in a development effort for five years. The constituent groups have come to understand the effort is an on-going one which has no beginning, middle or end. They continue working to improve the school's program with the same enthusiasm and energy as when they began, despite some changes in the cast of characters. The on-going improvement process has become a part of the culture of that school.

But expressed commitment is not enough. Commitment also has to be visible through actions and behaviors of the participants, and can take many forms from teachers and administrators attending regularly scheduled

meetings to people meeting on their own time after school or on weekends or during holidays. When teachers protect the time set aside to complete an activity, they demonstrate commitment. When a principal provides needed resources for a staff development activity, he or she is showing commitment.

A comprehensive data collection effort is always a part of the five-star restaurant model. Useful data come from many sources, including teachers, administrators, students, parents, the local board, and the community. The data also arrive in various forms: quantitative summaries of test scores or attendance patterns, qualitative vignettes, and interviews with important actors. Finally, useful data cover many issues ranging from achievement, to demographics, to attitudes, to climate.

Traditionally, schools collect a great deal of data. However, what separates the five-star model from the others is the way those data are used. In the comprehensive five-star model, there is a clear link between the results of data collection and the subsequent improvement activities. To be useful, those activities must be derived from systematically collected data and should identify the issues around which the school will organize the improvement activities. Plans are developed and implemented to address the chosen priorities.

Planning for data utilization is the most difficult phase of the five star model for three reasons. First, school improvement does not succeed just because someone mandates it. Many people must participate if plans are to be implemented effectively. Consequently, many people must be made to feel that they are an instrumental and vital part of the process. Coalitions must be formed and teams built. Second, while teachers and administrators are very competent planners, there is often a natural let down after planning occurs. Renewed commitment and energy must be found to

implement and follow through on the new plans. Finally, as recommendations are made and plans drawn up, the school or district must demonstrate unflagging commitment by allocating resources whether they are people, time, or money.

Because the comprehensive five-star model demands organization-wide change, it is threatening to many. For the model to succeed, it often needs someone to lead, nurture, cheerlead, and massage the improvement process through its various and predictable ups and downs. Whoever leads the effort must make it a top priority: the champion cannot simply talk involvement and commitment; he or she has to live it. And this requires commitment, time, and support. However, not only is the five-star approach more expensive in terms of people, time, money, and energy, it is also more difficult to accomplish. Because of that, it is not necessarily the best or the only viable route to school improvement. Just as a family raised on meat and potatoes might not enjoy beef bourguignon, a school with different needs might be better off with a less complex approach to school improvement.

This model also is not without political agendas. Indeed, empowerment is quite common. Legitimation and evaluation are also present. Often, a combination of political uses are intertwined with the technical uses. Such a complex interaction makes it difficult to eliminate any political uses. However, the point of describing these uses is not to prevent their use, but to make the potential user aware of the full spectrum of uses that may be made of data.

Conclusion

The school effectiveness literature is full of descriptions about what organizational conditions promote effectiveness, but there is little assistance on how to get there. This paper outlined three different models for systematically using organizational data to enlighten the planning process and to enhance the prospects for implementing needed improvements. Our experience offers three important lessons for local educators.

First, the introduction of systematic data into the decision process can provide more clarity and direction to daily decisions. School administrators make an inordinate number of decisions over the course of a routine day. Many of these decisions are crisis oriented, field decisions made at the moment (Baldridge, 1983). In the fragmented, interrupted, verbal world of the school principal (Morris, Crowson, Porter-Gehrie, & Hurwitz, 1984), these small decisions shape major activities of the school: program, instruction, curriculum, staffing, and discipline. Principals move from one event to another with little time to contemplate the effects of their actions. The incorporation of data into the decision context may help make the decision process a more reflective one.

Second, there is no single best strategy for using data. Each model has its strengths and weaknesses. The fast-food model has the advantage of being inexpensive and easy to implement, but the risk is high that the resultant data will not be used. The strength of the gourmet cafeteria approach is that it gets a team of people together to address school issues, but its weakness is often the lack of any long-term commitment to a targetted improvement effort. The advantage of the five-star restaurant

model is its prominence--the effort is often a key priority for the school. Its disadvantage is the continual struggle to maintain momentum for the effort and to have it become part of the value system of the school.

The final lesson is that political agendas play an important part in any improvement effort. To assume that data such as these will be used solely for improving organizational arrangements is both naive and incomplete. The political uses mentioned above interact with rational applications to create a complex picture. We have no easy answers regarding how to maximize the positive aspects of each, but rather mention it as a way to sensitize potential users to the complexity of the issue.

The use of data to identify organizational strengths and weaknesses may be a necessary condition for school improvement. However, it is not a sufficient condition. Schools and school systems are seeking help to move beyond that first step. The strategies outlined in this paper offer some alternatives. Teachers and administrators are making use of data to correct problems in their schools; these are healthy signs. If schools are to continue along the path of improvement, careful application of data concerning school-wide organizational conditions will be a useful aid.

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